

JUNCKERS CLIP SYSTEM

Installation Guidelines



JUNCKERSHARDWOOD.COM

JOIN THE COLLAB WITH NATURE

LOW-PROFILE SPORTS FLOORS. HIGH-PERFORMANCE RESULTS

Junckers Clip System is a low-profile, floating sport system floor designed for gymnasiums, fitness centers, and multi-purpose sports facilities.

The system is built with 7/8" solid hardwood floorboards, joined with steel clips and installed over a 3/8" or 5/8" performance foam underlay. This unique construction allows the floor to flex independently, ensuring the perfect balance of strength, resilience, and comfort for athletes at every level.

With a construction height of just 1¼" to 1½", the Clip System is ideal for renovation projects or facilities where a minimal floor height is required. Since no nails are used, the floor can also be taken up and reinstalled elsewhere if needed, offering unmatched flexibility.

Tested and approved in accordance with EN 14904, the Clip System delivers outstanding shock absorption, ball bounce, and friction properties. It meets international standards for sports performance, making it an excellent choice for basketball, volleyball, handball, squash, and a wide range of athletic activities.

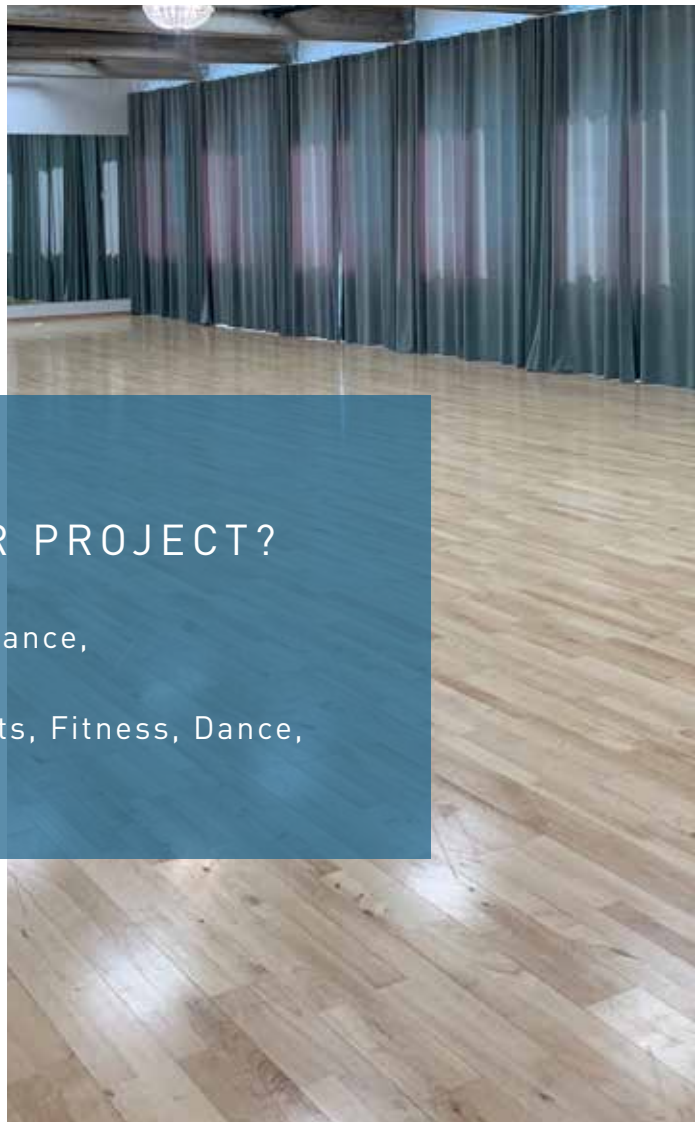
CONTENTS

2	LOW-PROFILE SPORTS FLOORS
4	BEFORE YOU BEGIN
5	TOOLS YOU NEED
6	HOW TO INSTALL
10	CHOICE OF CLIP
11	CLIP SYSTEM - HOW TO GET IT RIGHT

2 BOARD LENGTHS WHAT WORKS FOR YOUR PROJECT?

6' Boards. - Fitness, yoga, pilates, dance,
commercial and residential gyms.

12' Boards. - Basketball, Multi Sports, Fitness, Dance,
Commercial gyms



BEFORE YOU BEGIN

The building must be enclosed and weather tight. Permanent heat, light and ventilation must be installed and operating during and after installation.

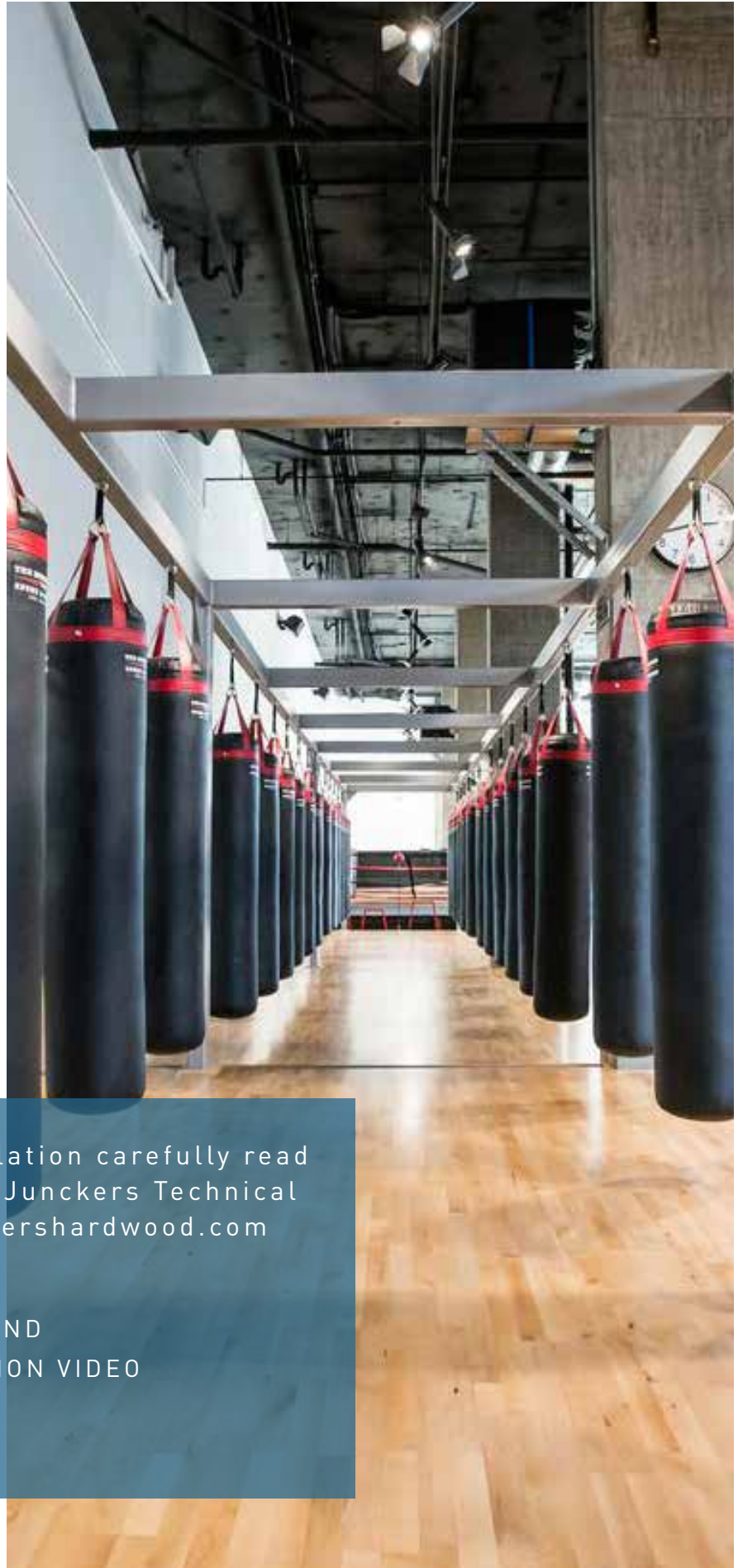
Cast concrete elements, screeding and other wet trades, which contribute moisture to the building, e.g. tiling, plastering and priming of paintwork must also be completed and fully dry.

The relative humidity in the building must be as expected when the building is in use.

The residual moisture contained in the concrete or screed must not exceed 90 % RH.

For plywood based subfloors the moisture content should not exceed 12 %.

Solid floorboards should always be installed immediately after arrival at the building site. Do not break the packaging open until just prior to installing the floor, i.e. no acclimating of the floorboards on site must take place.



Before starting the installation carefully read the laying instructions at Junckers Technical Information on www.junckershardwood.com



SCAN TO FIND
INSTALLATION VIDEO

TOOLS YOU NEED



CLIP



TAPPING BLOCK



MITER



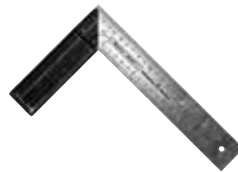
JIGSAW



HAMMER



JOINT PULLER



TRY-SQUARE



SYLVAFIX JOINT GLUE



TAPE



MEASUREING TAPE



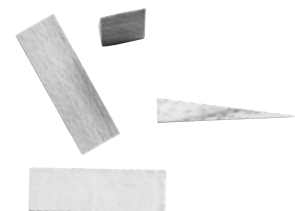
UTILITY KNIFE



STRAIGHT EDGE



PENCIL



TEMPORARY WEDGES

HOW TO INSTALL

01 FLATNESS OF THE SUBFLOOR

The subfloor must be levelled so that any deviations in the flatness do not conflict with the requirements of the method stated below.

Straight edge:

Flat tolerance: max deviation 3/16" over 10 ft straight edge.

Deviations are measured as gaps under the straight edge. The surface must be and broom clean.

Low spots are corrected using leveling compound. Scrape, sand or grind any high areas/spots.



02 MOISTURE BARRIER AND INTERMEDIATE LAYER SPORTSFOAM

2A | A layer of 8 mil plastic is required as a moisture barrier on top of the concrete subfloor. Run plastic 4" up wall and tape in place. Overlap plastic 8" and tape seam with duct tape.

2B | As intermediate layer for a Junckers floating sports floor, use Junckers 3/8" or 5/8" SportsFoam.

Type depends on needed performance.

The SportsFoam is laid parallel to the laying direction of the floorboards with joints fully closed and taped in place.

For more information, see Junckers SportsFoam H 3.3



03 CHOICE OF INSTALLATION CLIP

Installation clips are available in several sizes, each designed for specific ranges of relative humidity (RH). The correct clip size is determined mainly by the maximum RH expected in the building throughout the year.

For larger floor areas, it may be necessary to select a bigger clip size than the RH alone would indicate, in order to minimize overall floor movement and ensure long-term stability.



THE UNIQUE ADVANTAGES OF THE CLIP SYSTEM

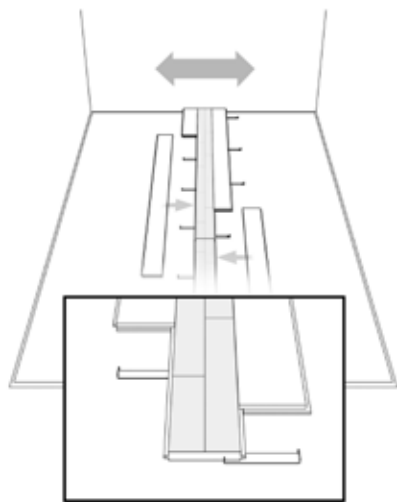
- **Low profile construction** – ideal for renovations or where floor height is limited.
- **High-performance sports surface** – meets international standards for shock absorption, ball bounce, and safety.
- **Fast installation** – no nails required; boards click into place with steel clips.
- **Low VOC and healthier indoor air** – contributes to a safe, sustainable environment.
- **Less dust, cleaner process** – minimal disruption during installation.
- **Excellent acoustic properties** – outstanding sound reduction for a quieter sports facilities.

04 CENTER-ROW BOARD

For installation with starting point in the centre of the facilities, laying is started with a CenterRow board. This way the floor can be installed faster with two teams.

The floorboard is constructed with a double clip-groove and a tongue on both sides.

The CenterRow board is placed in the entire length of the hall and hereafter, installation can continue in two directions.



05 CLIPS, EXPANSION STRIP AND ADHESIVE

5A | Before installation of the floorboards, make sure that the clip size corresponds to the expected relative humidity in the building during a full year.

Turn the floor board over and tap the end of the clip with the hole(s) into the groove on the back of the floor board. The plain end of clip must point in same direction as the tongue. This is also the laying direction.

5B | All floorboard header joints are carefully glued, Use enough glue to secure a tight and strong joint. Never apply adhesive to the longitudinal sides of the floorboards, except for the floorboards in the last row, if the clip-groove is cut off.

5C | Junckers expansion strip is mounted tautly between floorboard ends and walls.



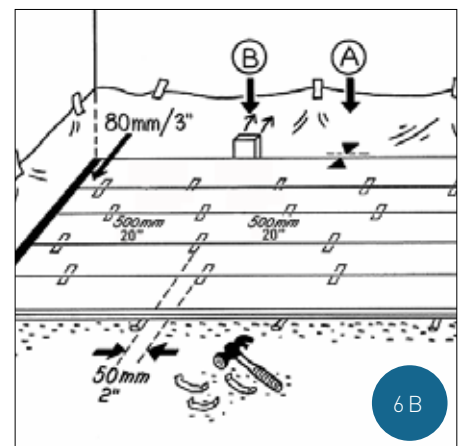
06 CLIPS, EXPANSION STRIP AND ADHESIVE

6A | Always allow for proper expansion space on the side of the floor. the rule is 1/4" expansion space for every 10' of width on both sides

6B | The first and last clips are placed maximum 3" from the floorboard end adjoining the end wall.

The spacing of the clips must be maximum 20".

Ensure that the clips do not touch each other by alternating them (in line) at approx. 2" intervals.



07 PATTERN, FLOORBOARD

7A | Lay the floorboards in a random pattern, spacing floorboard header joints as far apart as possible. The distance between floorboard header joints in two consecutive rows should be at least 18". Avoid stair step patterns.

Stave joints in one row may not adjoin stave joints in the adjacent row, but must be spread as widely as possible and minimum 2"

7B | Be sure that the clip end is located correctly in the clip groove. When the floorboards are being laid, the loose clip end from the previous floorboard will locate automatically into the clip groove of the next floorboard.

7C | Since this can be difficult due to the elasticity of the mat, use e.g. a small metal plate or the like as a load spread sheet. The metal plate is moved as work progresses.

7D | Carefully knock the boards together using a tapping block.



08 JOINTS AND LAST ROW

8A | The last row of floorboards must be trimmed to width. Remember to leave the clear expansion gap between the floorboard and the wall.

8B | The tongue of floorboards in last row are glued and assembled to the floorboards in previous row. Only the last row floorboards are allowed to be glued lengthwise.

8C | Use a joint puller to slot the last floorboard into place.

Remember to remove spacer blocks before fitting the skirting.



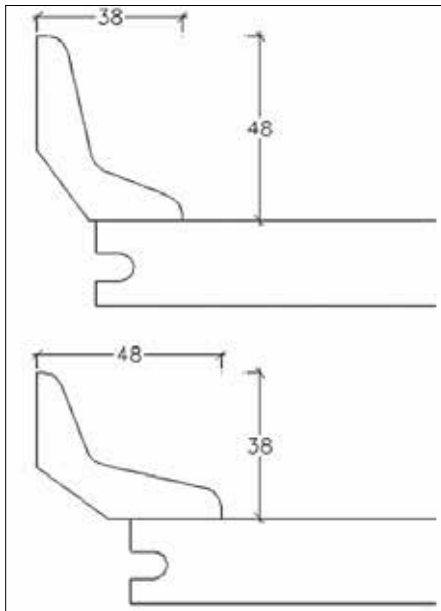
09 BASEBOARD

Depending on the wanted cover width, the baseboard can be mounted upright or in a lying position, see drawing.

The foot of the base must lie flat and be in contact with the floor. End joints may be either butt jointed together or cut as a 45° miter joint to enhance the visual effect of the joint.

The baseboard can be either glue fixed to the walls or screw fixed.

Do not fix the baseboard to the Junckers floor.



CHOICE OF CLIP

Clips are available in different sizes according to various air humidity ranges. The clip size is selected primarily on the basis of the expected maximum relative humidity in the building during the course of the year.

- **Larger areas:** In order to minimize the overall movements of larger floors and allow for varying RH in different types of buildings, it may be necessary to choose a larger clip than the one corresponding to the expected maximum RH.

With all clip sizes there will always be gaps when the relative humidity falls to, or below, the lower end of the recommended range.

CLIP GUIDE				
Floor area	Clip size	Humidity range %	Gaps at installation time	Label colour / Clip tagging
< 5000 sq. ft.	129.4 mm	35 - 65	Appr. 0.4 mm	Yellow, 2-hole
> 5000 sq. ft.	129.6 mm	35 - 65	Appr. 0.6 mm	Black, 2½-hole

We have clips matching any humidity range, see examples below			
Clip size	Humidity range %	Gaps at installation time	Label colour / Clip tagging
128.8 mm	10 - 40**	Arctic/desert areas*	White, 0-holes
129.1mm	25 - 55**	Appr. 0.1 mm	Green, 1hole
129.8 mm	65 - 85	Appr. 0.8 mm	Red, 3-holes
130.2 mm	75 - 95	Appr. 1.2 mm	Orange, 4-holes

***Arctic/desert areas**

The 128.8 mm clip is used in arctic and desert areas. Acclimating of the wood prior to installation is necessary.

**** Humidity range from 10 - 55 %**

In a very dry environment there will be some larger permanent gaps between the floorboards. Specifiers are advised to contact Junckers Technical department if such conditions are anticipated.

Fluctuation in the relative humidity

With all clip sizes, gaps will appear when the relative humidity falls to, or below, the lower end of the recommended humidity range.



CLIP SYSTEM - HOW TO GET IT RIGHT

ISSUE	WHAT HAPPENS	FIX
Clips too far from board ends (>3") or not engaged	Loose joints, clicking or metal noise	Place clips within 3" (80 mm) of ends. Ensure fully seated. Hold clip firmly when hammering on the side with the hole. Replace bent clips. Never reuse a clip once hammered in.
No expansion gap at walls/fixed points	Floor buckles or rises	Leave expansion gap at all walls and fixed objects. Use expansion strips at end joints where required.
No moisture barrier over concrete	Moisture damage, boards swell	Always install 8 mill (0.20) PE moisture barrier on concrete. Subfloor must be dry before installation.
Subfloor not flat / soft underlay	Dead spots, hollow sound, excessive vertical movement	Check flatness (max 3/16" over 10 ft). Use self-leveling compound. Only use Junckers approved underlays.
Wrong clip type, missing clips or wrong clip spacing	Irregular gaps between boards	Use correct clip for RH range. Maintain spacing 20" (500 mm).
Long edges glued	Restricted movement, risk of cracks	Glue end joints only – never the long edges (except final row).
Improper gluing of end joints	Weak or open joints	Apply SylvaFix glue to the groove end of the board. Make sure end joints are tight before engaging clips. Wipe off excess glue immediately with a clean rag.
Rubber mallet used to engage clips	Clips not locking properly	Always use a hammer – never a rubber mallet – to engage clips.
Large sports floors (basketball / multisport)	Gapping or uneven layout on big areas	Option: start installation from center line and work both ways. Use factory double tongue center boards
Dead spots	Poor ball bounce	Subfloor not level / flat
Metal noise	Clips overlapping	Dismantle and remove and replace clips

